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## II. CLAIMS

1. (Currently Amended) A method of determining an environmental condition by ~~measuring a~~ comprising the measurement of a natural biochemical composition ~~ef by~~ detecting qualitatively or quantitatively a plurality of different biomolecules in one or more microorganisms exposed to said environmental condition, wherein said composition specifically changes as a result of a reaction of the microorganism under the influence of said environmental condition, and determining said environmental condition on basis of said measurement.
2. (Currently Amended) A method for determining changes in an environmental condition ~~by measuring changes in~~ comprising the measurement of a natural biochemical composition ef by detecting qualitatively or quantitatively a plurality of different biomolecules in one or more microorganisms exposed to said changes in an environmental condition, wherein said composition specifically changes as a result of a reaction of the microorganism under the influence of said environmental condition, and determining said changes in an environmental condition on basis of said measurement.
3. (Currently Amended) A method for determining an environmental condition comprising the steps of measuring a natural biochemical composition ~~ef by detecting~~ qualitatively or quantitatively a plurality of different biomolecules in one or more microorganisms exposed to said environmental condition, comparing said biochemical composition to a predetermined calibration line of a plurality of biochemical compositions of said one or more microorganisms obtained by means of exposure of said one or more microorganisms to a plurality of environmental conditions and determining said environmental condition by means of the position of said biochemical composition on said calibration line.
4. (Currently Amended) A method according to ~~any of claims 1-3~~ claim 1, wherein said one or more microorganisms comprise bacteria, fungi and/or yeasts.

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5. (Currently Amended) A method according to ~~any one of the preceding claims~~ claim 1, wherein said biochemical composition comprises the transcriptome, the proteome and/or the metabolome of a microorganism.
6. (Currently Amended) A method according to ~~any one of the preceding claims~~ claim 1, wherein said biochemical composition is the transcriptome.
7. (Currently Amended) A method according to ~~claim 5 or 6~~ claim 5, wherein said biochemical composition is determined using microarrays.
8. (Currently Amended) A method for controlling a process, comprising a method according to claim 1.
9. (Original) A method for controlling a process, comprising a method according to claim 8.
10. (Currently Amended) ~~Use of a~~ A method according to claim 1, ~~wherein of determining~~ an environmental condition of a food preparation process, a biofilm formation process, a fermentation process and/or a bioconversion process is determined by measuring a natural biochemical composition present in said process by detecting qualitatively or quantitatively a plurality of different biomolecules in one or more microorganisms present in said process, and determining said environmental condition on basis of said measurement.
11. (Currently Amended) ~~Use of a~~ A method according to ~~any one of claims 1-9~~ claim 1, for determining a chemical and/or biological substance in air and/or aqueous environment comprising measuring a natural biochemical composition in said environment by detecting qualitatively or quantitatively a plurality of different biomolecules in one or more microorganisms in said environment and determining the

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presence of said chemical and/or biological substance on basis of said measurement.